

# **EXHIBIT G**

## **Joyce Deposition**

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF PUERTO RICO

\*\*\*\*\*  
UNITED STATES OF AMERICA :  
 :  
Plaintiff :  
 :  
v. : CIVIL NO. 98-1664 (CCC)  
 : CIVIL NO. 98-2344 (CCC)  
33,92536 ACRES OF LAND, MORE :  
OR LESS, SITUATED IN VEGA BAJA, :  
COMMONWEALTH OF PUERTO RICO, :  
AND JUAN PIZA BLONDET, AND :  
UNKNOWN OWNERS :  
 :  
Defendants :  
 :

\*\*\*\*\*  
DEPOSITION OF:

DR. JAMES JOYCE

was taken on April 3, 2006 at the offices of CARLOS  
GAZTAMBIDE & ASSOCIATES, Banco Popular Center, Suite  
1515, 208 Muñoz Rivera Avenue, Hato Rey, Puerto Rico,  
commencing at 9:33 a.m.

BONAFIDE & CERTIFIED REPORTING  
P.O. BOX 9022272  
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1 A No, no, no.

2 Q Now, perhaps this is a little obvious but you  
3 aren't aware of any situations where people have been  
4 allowed to extract sand from a wetland, have you?

5 A From a wetland itself?

6 Q Yes.

7 A No. I've, what I would say, based on the  
8 reading the regulations that they would not be allowed  
9 to extract from a wetland area. At least with DNR. If  
10 I recall, DNR requires that the Corps of Engineers  
11 stipulate the wetland boundaries before, before you can  
12 extract.

13 Q Would it be fair to say that, your  
14 understanding is that DNR says first find out what the  
15 boundaries of the wetlands from the Corps and then  
16 that's all off limits?

17 A To get the permits, that's, that's right.

18 Q Did you speak to anyone at DNRA about whether  
19 they would ever allow extraction of sand in a Corps'  
20 defined wetland?

21 MR. MUNPHREY: I object to the form.

22 THE DEPONENT: No, no, I didn't discuss that  
23 directly.

24 EXAMINATION CONTINUED

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1 translated, within my report, sections that pertain to  
2 this. I don't refer it to any place in this particular  
3 estimate and I believe, I don't know whether I saw it  
4 in a, in the, in the actual literature or whether it  
5 was something that I was told but it is actually, it's  
6 a typical estimate because in my of my other job we  
7 left, we had to leave ten, ten meters to adjacent  
8 properties. It's a normal restriction, a ten meter  
9 buffer zone.

10 EXAMINATION CONTINUED

11 BY MR. HARRISON:

12 Q Were there wetlands involved in your other  
13 project?

14 A No, there wasn't.

15 Q Have you been involved in any projects of  
16 sand extraction near wetlands?

17 A No.

18 Q And just so I understand fully, you're not  
19 sure right now whether you relied on Darysadel's advice  
20 for an actual statement in the regulations for your ten  
21 meter evaluation?

22 A That's true.

23 Q And what is your understanding of Darysadel's  
24 involvement in sand extraction permitting?

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1 BY MR. HARRISON:

2 Q Now you discussed using a ten meter buffer  
3 and, is that correct?

4 A Yes, yes, it is.

5 Q And in your first version of your report you  
6 used a five meter buffer, is that --

7 A That's right.

8 Q Did you speak to anyone at DNRA in the  
9 division that issues permits for sand extraction about  
10 what their policy was?

11 A Well, I spoke with Darysadel. She's the one  
12 who sent me the regulations.

13 Q And is there a particular place in the  
14 regulations you can refer to that you found the ten  
15 meter number?

16 A I'm not sure. I believe there is or  
17 Darysadel may have told me about it directly. Let me,  
18 I do believe I refer it in the report.

19 Q Do you have a copy of the regulations with  
20 you that she gave you?

21 MR. MUNPHREY: I believe he said it's 80  
22 pages.

23 THE DEPONENT: No, that was the 80 pages. I  
24 did, however, usually in places like that I have

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1 A Actually we had a conversation about it  
2 previously in another case in that area and she was  
3 kind of asking my advice about, you know, what the  
4 deposits were like and how much and she was, it was a  
5 case of, a little different than this.

6 It was actually some other property that was  
7 expropriated for the Tortuguero Reserve. They were  
8 claiming that that contained quartz sands and that,  
9 therefore, they, they should get reimbursed for those  
10 costs.

11 That whole argument is much different because it  
12 fell into the reserve area, that was even marked out  
13 previous to the taking of the land so we just had a  
14 discussion about that and especially in terms of what,  
15 what she was really asking about, I remember now, is  
16 how I did volume estimates and how I came to volume  
17 estimates and she was actually referred to by another  
18 appraiser on a different case that I had worked with  
19 them.

20 Q I'm going to ask you the same question and  
21 try to focus a little bit more. Is it your  
22 understanding that she's involved in, in the day to  
23 day decisions of whether or not to issue permits for  
24 sand extraction?



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1 That's done by weighing the sample, drying it and  
2 then weighing it again. That gives you the percent of  
3 water and then Q tons per square foot is the  
4 uncompressive strength of the, of the rock, of the  
5 soil. I'm sorry. Unconfined, compressive strength of  
6 the, of the soil and which is probably an estimate, my  
7 guess.

8 They use what's called a penetrometer for that and  
9 you can see some of them are pretty high, 58.43, some  
10 of the blow counts get up into the 20's and that's  
11 probably pretty dense stuff.

12 Q Did you reach a conclusion in your report as  
13 to how dense or how much water was in the sand?

14 A No. I really didn't put that in the issue  
15 because I wasn't calculating the square feet.  
16 Sometimes you can, you can actually get the clay  
17 percent by looking at the water content but usually the  
18 more clay, then the more water it has.

19 Specifically in Boring 2 where the deep sand was,  
20 that was really good material and you can see the water  
21 contents stayed pretty low but there's a pretty high  
22 blow, blow count so that's well compacted sand at that  
23 point but as far as tons, I really don't know.

24 Q Okay.

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1 You mean royalty in terms of someone else extracts from  
2 your property or --

3 Q Yes.

4 A -- the costs per cubic meter?

5 Q I was going to ask you both those questions.

6 A Okay. Royalty rates, no. I don't, I don't  
7 really know and it's been a while since I actually  
8 asked for costs of sand. When I had done a previous  
9 job silica sand was about ten times the value of normal  
10 sand. At that time it was like \$30. a cubic meter.  
11 and I'm sure it's gone up since then. Regular sand  
12 has.

13 Q Who would you ask?

14 A If I was to find it now I'd go ask Owens  
15 Illinois how much they pay per cubic meter.

16 Q Who would you ask if you were trying to find  
17 out about construction rate sand?

18 A Oh, I'd probably call an "arenero", a sand  
19 place and find out how much but I would call one of the  
20 companies that extract themselves.

21 Q And this is also a question I've sort of  
22 asked you but, do you know how many thousands tons of  
23 sand are extracted each year in Puerto Rico?

24 A No. No, but it's, I mean, all kinds of sand?

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1 A I mean, it's something I could do if I sat  
2 down and got, you know, some average density estimate  
3 and then computed from meters to feet and, you know.

4 Q That analysis hasn't been done yet?

5 A I haven't done it. I know Carlos Gaztambide  
6 asked me about it, if I knew or one of his assistants  
7 had called me and said did I know how many tons there  
8 were in a square, in a cubic meter of sand and I really  
9 don't.

10 Q That's basically what you got from the  
11 testing laboratory, right?

12 A Yes, there's two things. There's the,  
13 there's the handwritten stuff that they gave to me  
14 pretty quickly and then the other stuff that they sent  
15 later so and they're really the same, but that's up to  
16 you, if you want all of it. That was a bill.

17 MR. HARRISON: Actually if you would include  
18 a copy of the bill, I would appreciate that.

19 EXAMINATION CONTINUED

20 BY MR. HARRISON:

21 Q I think we covered this before a little bit  
22 too. Has anyone told you what royalty rates are  
23 offered for this kind of sand in Puerto Rico?

24 A I don't know what the current rates are.

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1 Q Yes.

2 A It's got to be huge.

3 Q Or just this type of sand.

4 A This type of sand I really don't know how  
5 much is actually extracted.

6 Q Did you do any salinity analysis or otherwise  
7 test the quality of the sand out there?

8 A No.

9 Q Would that make a difference in a small  
10 washing?

11 A Yes, that could be washed. I don't, I don't  
12 think that that would be a problem and I was just  
13 wondering if I tasted it. I sometimes taste my soil  
14 samples, check for silt and clay.

15 Q Scientists end up sticking stuff --

16 A That's right. But I don't know if I did or  
17 not but it wouldn't be a particular problem and besides  
18 that area, what's kind of interesting is the water in  
19 the lagoon is fed fresh, fresh springs so I would guess  
20 that the salinity would be very low.

21 Q We're almost done. You said that there's  
22 about two square meters of sand pretty much everywhere  
23 on this area, is that right?

24 A That's, that's about the minimum, typically



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1 and not just for that area but everywhere and that was  
2 one of the conclusions of the thesis.

3 Q Okay.

4 A You almost get about, well, two meters thick.  
5 It usually runs about, you know, two meters thick and  
6 other places it's deeper. Tortuguero is a place  
7 around, Laguna Tortuguero is noted not only in the  
8 master's thesis but I believe even, maybe even on the  
9 geologic map, as having very thick deposits, thicker  
10 than most other places.

11 Q Now, Mr. Gaztambide shared with you his  
12 estimate of what, what the sand on that site is worth?

13 A No, as a matter of fact, he did not. I've  
14 never seen the estimates.

15 Q If I told you that his range from your  
16 minimum sand extraction potential to your most probable  
17 sand extraction potential and that is, actually this is  
18 based on the original 100,000 meters and then the  
19 200,000 meters, was 3.2 to 6.3 million dollars, would  
20 that seem reasonable to you?

21 A Yes. It would make me wish that I sold sand  
22 instead of taught geology basically, but, yes, I know  
23 that sand is very valuable. I've been in other, not  
24 even silica, just regular sand cases and it's a big

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1 issue?

2 A Potentially, yes. The point about the, you  
3 know, if you're getting permits to put in houses, then  
4 it sort of takes out the environmental issue, you know.  
5 Once there are houses in there, then we've ruined the  
6 environment so then extracting the sand doesn't make  
7 any difference, you know.

8 MR. HARRISON: I think I'm done with my  
9 questions. There were a couple of things that we asked  
10 for so I will, when I go back, send you guys an e-mail  
11 confirming that and we can coordinate. Like, for  
12 example, his CV and there's the cases --

13 THE DEPONENT: I can have that sent here,  
14 that will be here tomorrow.

15 MR. HARRISON: Okay.

16 MR. E. HARRISON: Yes. Limiting the, you  
17 know, testimony to the area --

18 MR. MUNPHREY: If there's a question that's  
19 generated by that.

20 MR. P.E. HARRISON: And the list of cases.

21 MR. HARRISON: Yes. We also, what did we ask  
22 for? List of cases, CV and we got Ms. Perez' number,  
23 the name --

24 THE DEPONENT: Right. Her boss is Julio Toro

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1 issue.

2 Q Knowing that, have you considered going out  
3 and buying some of the vacant land that's out there?

4 A I tell my students if they're not doing well  
5 in class, "You're not going to do well as a geologist  
6 so go buy some land that's got sand on it."

7 In fact, one of our worst students is now doing  
8 that. He's selling, he's working in his father's  
9 quarry selling rock. He wanted to hire me one time to  
10 do some sand, you know.

11 Q What's your opinion on why, why no else is  
12 mining sand out there in Laguna Tortuguero?

13 A I don't really have an opinion. It's, what  
14 normally happens here people get double value from  
15 their land most of the time when housing is developed  
16 and that's, a lot of times they'll wait because it  
17 helps you get permission as well, that you're  
18 developing and you get permission to take the sand out,  
19 sell the sand, get rich and then, then sell the  
20 property for housing and get richer and I would imagine  
21 that's basically what it's waiting on. Other than the  
22 areas that are covered by the reserve, and then,  
23 obviously, those cannot be used.

24 Q Or if there were some other environmental

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1 so you will see him.

2 MR. HARRISON: I believe that is everything.  
3 Jeff might remember something else.

4 EXAMINATION CONTINUED

5 BY MR. HARRISON:

6 Q And one last question. Dr. Joyce, in looking  
7 through your file that you kind left at lunch, there  
8 were two sets of e-mails from Mr. Vidrine to Mr.  
9 Gaztambide. Do you recall these two e-mails?

10 A Yes, I do.

11 Q Did Mr. Gaztambide show them to you?

12 A Yes, he did. Actually, these were faxed.

13 MR. HARRISON: I'd just like to attach those  
14 as the final exhibit.

15 MR. P. E. HARRISON: Okey. Why don't we  
16 attach those e-mails as the next exhibit and then all  
17 the pictures that you referred to --

18 MR. HARRISON: We can do that, we can do  
19 that.

20 THE DEPONENT: I think all the pictures we  
21 talked about were in my report.

22 MR. MUNPHREY: No, these.

23 MR. HARRISON: No, these were not. So we've  
24 got, Exhibit 15 is the two e-mails. Actually, was







